

REMARKS

Claims 1-8 are pending in this application. Claims 1, 4, 6, 7, and 8 have been amended. Care has been exercised to avoid the introduction of new matter.

In the Office Action, claims 4 and 6-8 have been objected to due to minor informalities. These claims have been amended as suggested by the Examiner to correct the informalities. Applicants believe these amendments are fully responsive to the Examiner's concerns.

Claims 1-3 and 5 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,368,455 (Eisenmann). Claims 1 and 2 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication 2003-0072665 (Bachmann). These rejections are respectfully traversed. Applicants hereby request reconsideration and allowance of the claims in view of the following arguments.

Regarding the rejection of independent claim 1 based on Eisenmann, this reference does not disclose or even suggest the recited engaging portion defined by involute curves. Despite contentions to the contrary in the Office Action, there is no description in Eisenmann that that portion Z1-Z2, analogous to the recited engaging portion, comprises any involute curves. Rather, Eisenmann states, at col. 8:67 to col. 9:2, "[i]n Fig. 2, this distance is the distance Z1-Z2. This distance can be bridged simply by a **straight line** because it is very small compared with the greatly exaggerated illustration of Fig. 2 (emphasis added)."

Thus, Eisenmann does not anticipate independent claim 1, because it does not disclose each and every element of that claim. In particular, Eisenmann does not disclose claim 1's engaging portion defined by involute curves. Moreover, it would not have been obvious to modify the rotor of Eisenmann to add this feature of claim 1, because Eisenmann teaches away from using an involute curve shape for its engaging portion.

Regarding the anticipation of independent claim 1 based on Bachmann, claim 1 has been amended to clarify that its inner rotor has a plurality of first teeth which are one smaller in number than a second plurality of teeth of its outer rotor. Claim 1 has been further amended to recite that each of its first teeth have a tooth bottom defined by two hypocycloidal curves connected to the tooth bottoms of the two first teeth adjacent to each first tooth, respectively. This amendment is fully supported, for example, at Fig. 1 and the corresponding description of Fig. 1 at page 6, lines 6-13 of the present application. No new matter has been added. Bachmann does not disclose or even suggest tooth bottoms having the claimed curved shape.

Attached hereto as Exhibit 1 is a marked-up copy of Fig. 1 of Bachmann. Attached here to as Exhibit 2 is an enlarged copy of a portion of Fig. 1 of Bachmann. The teeth shown in circle A of Exhibit 2 correspond to the teeth shown in Fig. 5 of Bachmann. The recited first teeth of amended claim 1 are analogous to the teeth in circle B of Exhibit 1; however, they are not analogous to the teeth in circle A, because amended claim 1 requires the first teeth to be smaller in number by one than the teeth of the outer rotor (the circle A teeth do not meet this limitation).

The teeth in circle B of Exhibit 1 could arguably be considered to include an involute curve, as seen in Fig. 5 of Bachmann. But not a single one of the teeth of Bachmann has a tooth bottom defined by two hypocycloidal curves connected to the tooth bottoms of the two adjacent teeth, as required by amended claim 1. For example, the tooth bottom of the tooth enclosed in circle C of Exhibit 2 is defined by two hypocycloidal curves, but only one of the two curves is connected to the tooth bottom of an adjacent tooth.

Bachmann does not anticipate independent claim 1, because it does not disclose each and every element of that claim. In particular, Bachmann does not disclose claim 1's first teeth having a tooth bottom defined by two hypocycloidal curves connected to the tooth bottoms of the

two first teeth adjacent to each first tooth, respectively. Moreover, it would not have been obvious to modify the rotor of Bachmann to add this feature of claim 1.

Consequently, amended independent claim 1 is patentable, as are claims 2, 3, and 5, which depend from claim 1.

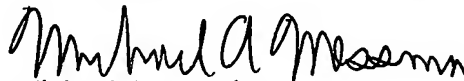
Claims 4 and 6-8 have been objected to as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 4 and 6-8 are patentable, because their base claim 1 is patentable.

Based upon the foregoing it should be apparent that the imposed objections and rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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